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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/693,511	10/20/2000	Joel E. Short	42253/205408	7936
826	7590	06/26/2006	EXAMINER	
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			DUONG, THOMAS	
		ART UNIT		PAPER NUMBER
				2145

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/693,511	SHORT ET AL.	
	Examiner	Art Unit	
	Thomas Duong	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 May 2006.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1, 3, 5-11, 14-16, 18, and 20-26 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1, 3, 5-11, 14-16, 18, and 20-26 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.
2. Amendment received May 15, 2006 has been entered into record. *Claims 1, 3, 5-11, 14-16, 18, and 20-26* remain pending.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 5-6 and 24-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. With regards to claims 5-6, Applicants recite the limitation,
 - "network device"

There is insufficient antecedent basis for this limitation in the claims.

6. With regards to claims 24-26, Applicants recite the limitation,

- "a conditional state"

There limitation is deemed indefinite. Please clarify the claim language.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 3, 7-11, 16, 18, 20, and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merchant et al. (US006775290B1), in view of Edsall et al. (US005742604), further in view of Lau et al. (US006463478B1), and further in view of Denning et al. (*Location-Based Authentication: Grounding Cyberspace for Better Security*).

9. With regard to claims 1, 7, and 18, Merchant discloses,

- a processor that communicates with an access concentrator to receive a plurality of port identifiers assigned by the access concentrator wherein each port identifier is associated with a location-specific connection port that provides connection for one or more hosts, the processor further determines which of the location-specific connection ports are currently accessing the network-by associating each of the received port identifiers with a location-specific

connection port, and the processor further comprises a querying agent configured to request transmission of location information associated with the plurality of port identifiers from the associated access concentrator in response to receipt of data packets that fail to include location information; and (Merchant, col.1, lines 39-49, 52-63; col.2, lines 48-57)

Merchant teaches of “*storing VLAN data indicating a plurality of VLAN identifiers corresponding to the multiple VLANs supported by the port*” and determining the active connections by comparing “*the VLAN identifier of a data packet received via the port ... with the plurality of VLAN identifiers ... [of] the stored VLAN data*” (Merchant, col.1, lines 54-59). Furthermore, Merchant discloses of “*many VLAN implementations define VLAN membership by groups of switch ports. For example, ports 1, 2, 3, 7 and 8 on a switch make up VLAN A, while ports 4, 5, and 6 make up VLAN B. Alternatively, VLAN membership may be based on MAC addresses*” (Merchant, col.1, lines 39-43). Hence, VLAN A is associated with specific switch ports 1, 2, 3, 7 and 8, which, in turn, are connected to specific machines located at specific locations. For example, machines of department C in a company, located on a certain floor, can all be connected to specific switch ports 1, 2, and 3. Therefore, machines of department C are associated with VLAN A and are specifically located on a certain floor of a building.

However, Merchant does not explicitly disclose,

- *a processor that communicates with an access concentrator to receive a plurality of port identifiers assigned by the access concentrator wherein each port identifier is associated with a location-specific connection port that provides connection for one or more hosts, the processor further determines which of the*

location-specific connection ports are currently accessing the network-by associating each of the received port identifiers with a location-specific connection port, and the processor further comprises a querying agent configured to request transmission of location information associated with the plurality of port identifiers from the associated access concentrator in response to receipt of data packets that fail to include location information; and

Edsall teaches,

- *a processor that communicates with an access concentrator to receive a plurality of port identifiers assigned by the access concentrator wherein each port identifier is associated with a location-specific connection port that provides connection for one or more hosts, the processor further determines which of the location-specific connection ports are currently accessing the network-by associating each of the received port identifiers with a location-specific connection port, and the processor further comprises a querying agent configured to request transmission of location information associated with the plurality of port identifiers from the associated access concentrator in response to receipt of data packets that fail to include location information; and (Edsall, col.2, line 53 – col.3, line 12; col.3, line 46 – col.6, line 27; col.7, lines 45-61; fig.7)*

Edsall discloses, *"this feature of the invention allows segmenting of a network such that ports of physically separated switches (e.g., in different buildings or on different floors of a building) may be associated in a virtual switch configuration"* (Edsall, col.7, lines 57-61). Hence, Edsall teaches of the ability of configuring a VLAN such that user stations in different buildings or on different floors of a building (i.e., location specific to the buildings or floors) can be associated

together as an entity designated by the VLAN identifier defined by the network administrator.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Edsall with the teachings of Merchant to *“increase the flexibility of the network switching . . . [by providing] a network switch that enables each switch port to support connections with members of multiple VLANs”* (Merchant, col. 1, lines 46-48). In addition, Edsall discloses, *“in many cases, it may be desirable to interconnect a plurality of hubs/switches to extend the VLAN associations of ports in the network”* (Edsall, col. 2, lines 8-20). Furthermore, both Merchant and Edsall disclose configuring VLANs by using switches and establishing VLAN identifiers.

However, Merchant and Edsall do not explicitly disclose,

- *a processor that communicates with an access concentrator to receive a plurality of port identifiers assigned by the access concentrator wherein each port identifier is associated with a location-specific connection port that provides connection for one or more hosts, the processor further determines which of the location-specific connection ports are currently accessing the network-by associating each of the received port identifiers with a location-specific connection port, and the processor further comprises a querying agent configured to request transmission of location information associated with the plurality of port identifiers from the associated access concentrator in response to receipt of data packets that fail to include location information; and*

Lau teaches,

- *a processor that communicates with an access concentrator to receive a plurality of port identifiers assigned by the access concentrator wherein each port identifier is associated with a location-specific connection port that provides connection for one or more hosts, the processor further determines which of the location-specific connection ports are currently accessing the network-by associating each of the received port identifiers with a location-specific connection port, and the processor further comprises a querying agent configured to request transmission of location information associated with the plurality of port identifiers from the associated access concentrator in response to receipt of data packets that fail to include location information; and* (Lau, col.1, line 11 – col.3, line 32)

Lau discloses, “*often times, individual segments are lost or damaged during transit. This may be the result of line noise or other factors that function to corrupt the data. In order to anticipate and compensate for such occurrences, computer networks implement error correction protocols capable of requesting retransmission of individual data frames that have been lost or damaged in transit*

” (Lau, col.1, lines 51-57). Hence, Lau teaches of implementing an error correction protocol capable of requesting retransmission from the source of lost or damaged packets (i.e., incoming packets with missing information).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Lau with the teachings of Merchant and Edsall to “*increase the flexibility of the network switching... [by providing] a network switch that enables each switch port to support connections with members of multiple VLANs*

” (Merchant, col.1, lines 46-48). In addition, Edsall

discloses, "*in many cases, it may be desirable to interconnect a plurality of hubs/switches to extend the VLAN associations of ports in the network*" (Edsall, col.2, lines 8-20). In addition, according to Edsall, "*therefore, what is needed is an encapsulation technique that ensures that the contents of the VLAN appended information are accurate, while obviating addressing problems with respect to intermediate devices coupled to the shared medium*" (Edsall, col.2, lines 45-49). Furthermore, Merchant, Edsall, and Lau disclose configuring VLANs by using switches and establishing VLAN identifiers.

However, Merchant, Edsall, and Lau do not explicitly disclose,

- *a database associated with the network gateway device that stores the location-specific connection ports for the purpose of identifying one or more hosts associated with the connection port that have been granted network authorization.*

Denning teaches,

- *a database associated with the network gateway device that stores the location-specific connection ports for the purpose of identifying one or more hosts associated with the connection port that have been granted network authorization.* (Denning, pg.2, para.2)

Denning discloses, "[*determining*] whether a person is attempting to log in from an approved location, e.g., a user's office building or home" (Denning, pg.2, para.2, lines 3-4). In addition, Denning discloses, "*the login location ... to identify the place of login as well as to authenticate it*" (Denning, pg.2, para.2, lines 6-8).

Hence, Denning teaches of identifying of hosts that are authenticated and granted access to the internal network via the gateway.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Denning with the teachings of Merchant, Edsall, and Lau to *“increase the flexibility of the network switching... [by providing] a network switch that enables each switch port to support connections with members of multiple VLANs”* (Merchant, col.1, lines 46-48). In addition, Edsall discloses, *“in many cases, it may be desirable to interconnect a plurality of hubs/switches to extend the VLAN associations of ports in the network”* (Edsall, col.2, lines 8-20). In addition, according to Edsall, *“therefore, what is needed is an encapsulation technique that ensures that the contents of the VLAN appended information are accurate, while obviating addressing problems with respect to intermediate devices coupled to the shared medium”* (Edsall, col.2, lines 45-49). In addition, according to Denning, the *“use of geodetic location can supplement or complement other methods of authentication”* and that *“its value added is a high level of assurance against intrusion from any unapproved location regardless of whether the other methods have been compromised”* (Denning, pg.2, para.6).

10. With regard to claim 3, Merchant, Edsall, Lau, and Denning disclose,
 - *wherein the processor uses VLAN protocol as a communication link between the processor and the access concentrator.* (Merchant, col.1, lines 52-63; col.2, lines 48-57; Edsall, col.2, line 53 – col.3, line 12; col.3, line 46 – col.6, line 27; col.7, lines 45-61; fig.7; Lau, col.1, line 11 – col.3, line 32)

11. With regard to claims 8-11 and 16, Merchant, Edsall, Lau, and Denning disclose,

- *wherein identifying the location-specific, connection port of each of the hosts at an access concentrator further comprises tagging the data packets being sent from each host with one of a plurality of port identifiers at an access concentrator.* (Merchant, col.1, lines 52-63; col.2, lines 48-57; Edsall, col.2, line 53 – col.3, line 12; col.3, line 46 – col.6, line 27; col.7, lines 45-61; fig.7; Lau, col.1, line 11 – col.3, line 32)
- *wherein communicating the port identifier to a network gateway device further comprises transmitting tagged data packets to a network gateway device.* (Merchant, col.1, lines 52-63; col.2, lines 48-57; Edsall, col.2, line 53 – col.3, line 12; col.3, line 46 – col.6, line 27; col.7, lines 45-61; fig.7; Lau, col.1, line 11 – col.3, line 32)
- *wherein tagging the data packets being sent from each host with one of a plurality of port identifiers further comprises tagging the data packets being sent from each host with one of a plurality of port identifiers that corresponds to a media access control (MAC) address.* (Merchant, col.1, lines 52-63; col.2, lines 48-57; Edsall, col.2, line 53 – col.3, line 12; col.3, line 46 – col.6, line 27; col.7, lines 45-61; fig.7; Lau, col.1, line 11 – col.3, line 32)
- *wherein tagging the data packets being sent from each host with one of a plurality of port identifiers includes implementing the use of VLAN protocol.* (Merchant, col.1, lines 52-63; col.2, lines 48-57; Edsall, col.2, line 53 – col.3, line 12; col.3, line 46 – col.6, line 27; col.7, lines 45-61; fig.7; Lau, col.1, line 11 – col.3, line 32)

12. With regard to claims 20 and 23, Merchant, Edsall, Lau, and Denning disclose,

- *further comprising executing the network system application at the network gateway device.* (Merchant, col.1, lines 52-63; col.2, lines 48-57; Edsall, col.2, line 53 – col.3, line 12; col.3, line 46 – col.6, line 27; col.7, lines 45-61; fig.7; Lau, col.1, line 11 – col.3, line 32)
- *wherein applying the results of the identification to a network system application further comprises applying the identified one or more of location-specific connection ports to determine port-specific information that will be communicated to a connection port* (Merchant, col.1, lines 52-63; col.2, lines 48-57; Edsall, col.2, line 53 – col.3, line 12; col.3, line 46 – col.6, line 27; col.7, lines 45-61; fig.7; Lau, col.1, line 11 – col.3, line 32)

13. With regard to claims 24-26, Merchant, Edsall, Lau, and Denning disclose,

- *wherein the database is configured to store a conditional state for each location-specific connection port.* (Merchant, col.1, lines 52-63; col.2, lines 48-57; col.11, lines 14-20; Edsall, col.2, line 53 – col.3, line 12; col.3, line 46 – col.6, line 27; col.7, lines 45-61; fig.7; Lau, col.1, line 11 – col.3, line 32)

14. Claims 5-6 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merchant et al. (US006775290B1), in view of Edsall et al. (US005742604), further in view of Lau et al. (US006463478B1), further in view of Denning et al. (*Location-Based Authentication: Grounding Cyberspace for Better Security*), and further in view of Hunt et al. (US006539422B1).

15. With regard to claims 5-6 and 14-15, Merchant, Edsall, Lau, and Denning disclose,

See *claims 1 and 7* rejections as detailed above.

However, Merchant, Edsall, Lau, and Denning do not explicitly disclose,

- *wherein the querying agent uses Simple Network Management Protocol (SNMP) as the communication link between the network device and the access concentrator.*
- *wherein the querying agent uses Extensible Markup Language (XML) as the communication link between the network device and the access concentrator.*

Hunt teaches,

- *wherein the querying agent uses Simple Network Management Protocol (SNMP) as the communication link between the network device and the access concentrator.* (Hunt, abstract, lines 9-14; col.15, lines 39-43; module 231, fig.2)
- *wherein the querying agent uses Extensible Markup Language (XML) as the communication link between the network device and the access concentrator.*

(Hunt, abstract, lines 9-14; col.15, lines 39-43; module 231, fig.2)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Hunt with the teachings of Merchant, Edsall, Lau, and Denning to *“increase the flexibility of the network switching... [by providing] a network switch that enables each switch port to support connections with members of multiple VLANs”* (Merchant, col.1, lines 46-48). In addition, Edsall discloses, *“in many cases, it may be desirable to interconnect a plurality of hubs/switches to extend the VLAN associations of ports in the network”* (Edsall, col.2, lines 8-20). In addition, according to Edsall, *“therefore, what is needed is an encapsulation technique that ensures that the contents of the VLAN appended*

information are accurate, while obviating addressing problems with respect to intermediate devices coupled to the shared medium" (Edsall, col.2, lines 45-49). In addition, according to Denning, the "use of geodetic location can supplement or complement other methods of authentication" and that "its value added is a high level of assurance against intrusion from any unapproved location regardless of whether the other methods have been compromised" (Denning, pg.2, para.6).

16. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merchant et al. (US006775290B1), in view of Edsall et al. (US005742604), further in view of Lau et al. (US006463478B1), further in view of Denning et al. (*Location-Based Authentication: Grounding Cyberspace for Better Security*), and further in view of Hernandez et al. (US006208977B1).
17. With regard to claims 21-22, Merchant, Edsall, Lau, and Denning disclose,
See *claim 18* rejections as detailed above.
However, Merchant, Edsall, Lau, and Denning do not explicitly disclose,
 - *wherein applying results of the identification to a network system application further comprises applying the identified one or more location-specific connection ports to a network billing application that provides bills subscribers based on location.*
 - *wherein applying the results of the identification to a network system application further comprises applying the identified one or more location-specific connection ports to an authorization application that provides authorization to network subscribers based on location.*

Hernandez teaches,

- *wherein applying results of the identification to a network system application further comprises applying the identified one or more location-specific connection ports to a network billing application that provides bills subscribers based on location.* (Hernandez, col.5, lines 24-42; col.11, lines 18-41)
- *wherein applying the results of the identification to a network system application further comprises applying the identified one or more location-specific connection ports to an authorization application that provides authorization to network subscribers based on location.* (Hernandez, col.5, lines 24-42; col.11, lines 18-41)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Hernandez with the teachings of Merchant, Edsall, Lau, and Denning to *“increase the flexibility of the network switching... [by providing] a network switch that enables each switch port to support connections with members of multiple VLANs”* (Merchant, col.1, lines 46-48). In addition, Edsall discloses, *“in many cases, it may be desirable to interconnect a plurality of hubs/switches to extend the VLAN associations of ports in the network”* (Edsall, col.2, lines 8-20). In addition, according to Edsall, *“therefore, what is needed is an encapsulation technique that ensures that the contents of the VLAN appended information are accurate, while obviating addressing problems with respect to intermediate devices coupled to the shared medium”* (Edsall, col.2, lines 45-49). In addition, according to Denning, the *“use of geodetic location can supplement or complement other methods of authentication”* and that *“its value added is a high level of assurance against intrusion from any unapproved location regardless of whether*

the other methods have been compromised" (Denning, pg.2, para.6). In addition, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Hernandez with the teachings of Merchant, Edsall, Lau, and Denning to produce billing information based on the location.

According to Hernandez, "*the invention provides a method of billing users according to their use of a network. The network has a plurality of links interconnecting a plurality of node locations. The method includes determining a usage price per unit bandwidth for a virtual path between first and second node locations, collecting traffic data for an amount of data transported between the first and second node locations*" (Hernandez, col.1, lines 56-63). In addition, according to Hernandez, "*the convenience and usefulness of WAN's has produced an uncontrolled increase in bandwidth usage by individual users. This increase has substantially increased the cost of WAN's to business relying on them*" (Hernandez, col.1, lines 36-39).

Response to Arguments

18. Applicant's arguments with respect to *claims 1, 7, 18, and 21-22* have been considered but are moot in view of the new ground(s) of rejection.
19. Applicant's arguments with respect to *claims 6 and 15* have been considered but they are not persuasive.
20. With regard to *claims 6 and 15*, the Applicants point out that:
 - *To the contrary, the present application is directed to location-based identification of data packet senders/receivers. The problem to be addressed in this art is*

providing services responsive to the location of a user. Hunt and the present application are not in the same field of endeavor. Additionally, the present application involves determining a location of a network user. However, Hunt is unconcerned with the issue of network user location. There would be no reason for one skilled in the art of providing location-based services to look to the art of networking ADC devices. Therefore, Hunt is not reasonably pertinent to the particular problem with which the inventor was concerned. Thus, Hunt is not an appropriate reference under 35 U.S.C. 103.

However, the Examiner finds that the Applicants' arguments are not persuasive because the Applicants specifically claim "*wherein the querying agent uses Extensible Markup Language (XML) as the communication link between the network device and the access concentrator*" (claims 6 and 15). Hence, as the Applicants duly noted, "*Hunt is directed to a method and system for remotely controlling operation of networked ADC devices, such as bar code readers*". Thus, Hunt teaches of accessing the network devices remotely via XML and the SNMP protocol.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason D. Cardone can be reached on 571/272-3933. The fax phone numbers for the organization where this application or proceeding is assigned are 571/273-8300 for regular communications and 571/273-8300 for After Final communications.

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Thomas Duong (AU2145)

June 22, 2006



Jason D. Cardone

Supervisory PE (AU2145)